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325

W. ROBERT MOORE, NATIONAL GEOGRAPHIC STAFF

Libyans defy hot sun or blown sand with a loose woolen barracan, worn as a toga or protective hood.

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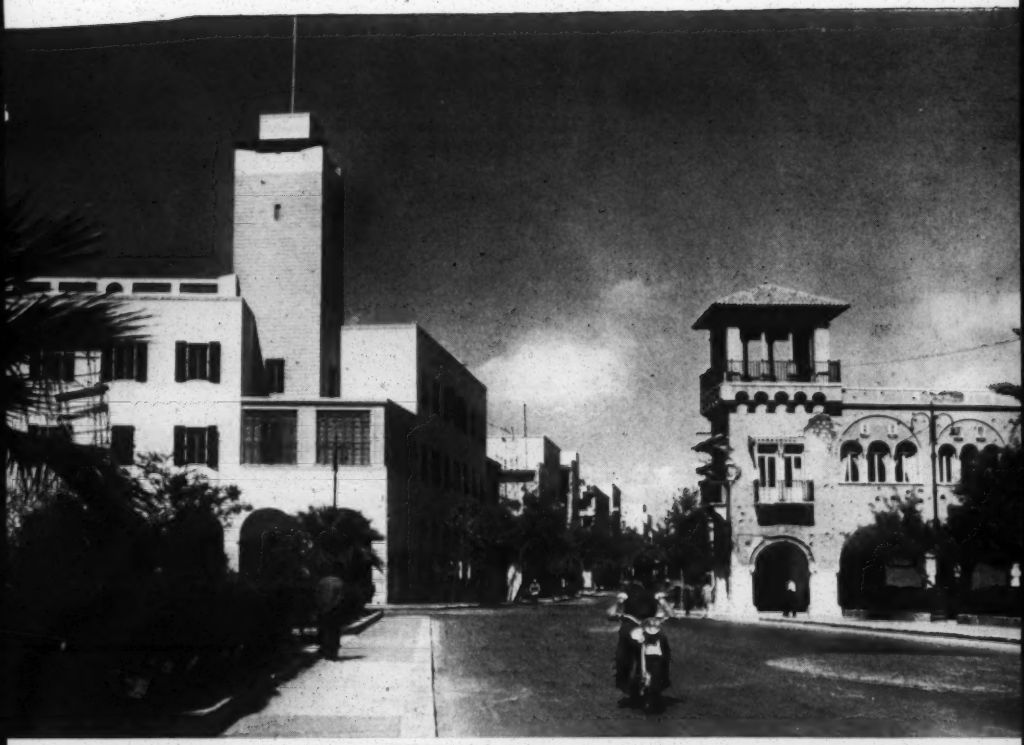

BENGHAZI has healed its war wounds except for a few battle-scarred buildings (right)

most sparsely populated countries (see chart, page 328). Temperatures soar in places above 120°. Starved for rainfall, without permanent rivers, Libyans consider water precious. Droughts frequently parch even those areas that normally get rain. The northern provinces of Cyrenaica and Tripolitania hold most of Libya's 1,105,000 people. Oases help support farming. Beyond the coastal plain, barley and grass turn terraced plateau country green. Esparto grass sells abroad for the manufacture of fine paper. Arabs harvest almonds and olives.

Inland stretches the desert. Oases with their date palms splash occasional green dots over the vast blazing waste. Nomads wander with flocks of sheep and goats. Camel caravans plod over tracts of rock-strewn emptiness, barren hills, shifting sands. Camels even draw plows through dusty desert soil, below.

Not always so starved for rich acres, Libya suffers from ages of destructive land use. Wildlife has almost completely disappeared. Today, agricultural experiments aim at increasing productivity. Agencies of the United Nations and FOA have furnished technical experts and money. In one recent year alone, one and a half million trees were planted in Tripolitania.

Libya gets a healthy boost

Libya Samples Liberty

World War II brought freedom to Tripoli's shores, starting a trend to independence in "captive Africa."

Photographs by W. Robert Moore, Chief, Foreign Editorial Staff, National Geographic Magazine

CHRISTMAS EVE, 1951, was special in Libya. On that day it became a free nation, first in a series of African countries to gain independence after World War II. The new Arab kingdom, sprawling over a piece of North African desert, adorned city streets with triumphant decorations. Despite poverty of resources, Libyans headed eagerly for the future.

Civilizations have risen in Libya—and fallen—for about 28 centuries. Ancient Phoenicians traded with blacks of the North African interior. Greece built cities. Rome brought the best of her chariot horses from Cyrene, in eastern Libya. Temples and amphitheaters still rear from Libya's parched acres, ruined but still splendid. Byzantines, Vandals, Arabs, and Turks swept over the land in their turn.

LAUGHING MOSLEM lads file beneath arches of sunlit street in Socna, an oasis town in central Tripolitania

In 1912, Italy gained control over Libya's three separate territories—Tripolitania, Cyrenaica, and Fezzan, profiting from a Mediterranean coastline 1,050 miles long. Libya remained part of the Italian Empire until World War II set North Africa ablaze. After the war, Great Britain took over the first two territories while France governed the Fezzan, a vast desert territory.

Later, the United Nations agreed Libya should be readied for complete independence by January 1, 1952. The deadline was met with only days to spare.

Nearly one quarter the size of the United States, Libya is one of the world's

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THE HACKLEY ART GALLERY FROM A PAINTING BY JOHN STEUART CURRY

Springtime's "T-Bomb"

IN Spanish, the word *tornado* means "twister." But people menaced by a terrible funnel-shaped cloud don't waste time speculating on meanings. By April 1 this year, 55 tornadoes paid seasonal calls on the Midwest and South.

In spring and early summer, cold dry air from the Arctic slices down the eastern flanks of the Rockies. It forces its way under warm, moist air moving upward from the Gulf of Mexico. The warm air rises rapidly, generating a counterclockwise motion. A spinning column of cloud swings lazily down from the black sky, flicking at the ground like the trunk of an elephant.

Winds may whirl upward to 500 miles an hour in that vortex. But instruments cannot withstand the blast. Few mortals have peered up the awesome funnel and lived to say what they saw in the near vacuum. Tapped by this unpredictable whirlpool of air, trees sail away like matches; houses may explode.

Funnel-shaped tornado clouds wreak damage only when reaching the ground. About one third of them remain aloft. Touching the sea, they become waterspouts. The storms move at from 25 to perhaps 140 miles an hour, playing uncanny pranks along narrow paths sometimes more than 40 miles long. One tornado drove a pine plank through a steel girder on Eads Bridge at St. Louis. Storms may strike the same place any number of times, as proved at Codell, in western Kansas. Citizens won't forget one date, May 20. For three successive years a tornado howled into town on that day.

Happily, there's no reason to believe that tornadoes are striking more frequently. The apparent increase simply stems from better reporting.—S.H.

UMI

ROMAN ARCH built in 2nd century for Marcus Aurelius leads toward a minaret in the old section of Tripoli

Libya

from United States and British military operations. Both countries keep troops and bases there, paying for the favor with economic help. Near Tripoli, U. S. Air Force jet bombers streak into Wheelus Field, a vital United States base in North Africa. In return, the United States has sent millions of dollars to Libya.

Tripoli and Benghazi hold equal rank as capitals of Libya. Tripoli calls to mind words from the U. S. Marine Corps hymn: "From the halls of Montezuma to the shores of Tripoli. . . ." The song refers to a dramatic page of naval history. The infant American Navy blockaded Tripoli's harbor to smash Barbary Coast pirates.

Today, Tripoli has forgotten its piratical, slave-trading history. Almost untouched by war damage, its gleaming modern buildings flank broad boulevards built by the Italians. In narrower streets, Bedouins haggle over sheep and goats. Veiled Moslem women drift like ghosts among crowded market stalls.

An Italian-built coastal road leads east to Cyrenaica and Benghazi, the second capital. Benghazi, home of the king, was nearly half destroyed during the war.

In Cyrenaica, a strict religious order, the Senussi, preach the return to early Islam's rituals and beliefs. During World War II they struck fiercely at Italian troops. The grandson of the Senussi's founder became Emir of Cyrenaica in 1947. Today he is better known as Idris I, King of free Libya.—J.A.

THE NINE FREE NATIONS OF AFRICA

Country, Year of Independence	*Area (Sq. Mi.)*	*Population*	*People per sq. mi.*	*Capital*
Liberia, 1847	43,000	1,250,000	29	Monrovia
Union of South Africa, 1910	472,358	13,669,000	29	Pretoria, Cape Town
Egypt, 1922	386,100	22,934,000	59	Cairo
Libya, 1951	679,359	1,105,000	1.6	Tripoli, Benghazi
*Ethiopia-Eritrea Federation, 1952	457,266	20,000,000	44	Addis Ababa, Asmara
Sudan, 1956	967,499	8,900,000	9	Khartoum
Morocco, 1956	158,593	9,723,000	61	Rabat
Tunisia, 1956	60,166	3,782,000	63	Tunis
Ghana, 1957	78,802	4,191,000	53	Accra

** Before its conquest by Italy, 1935, Ethiopia had been independent for centuries.*

Freedom draws near for Nigeria, Federation of Rhodesia and Nyasaland, Somalia, Uganda. Independent nations now cover 28 per cent of Africa's total area. Free people make up 40 per cent of its population.

ALEXANDER TAYLOR

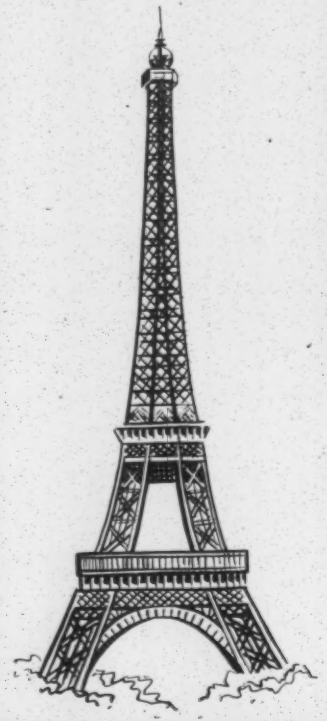
among all the junk magnetizes Parisian and tourist. Alert antique dealers now hound the stalls. Often they set up their own.

Flea market merchants are masters at outsmarting the would-be bargainer. You never know, when you come, what you'll have in hand when you leave. Franc Shor, in his article, tells of trying to buy an antique desk, using his most artful bargaining methods. He got it, too—at a price. That wasn't all, though. He found himself buying a venerable, full-scale, honest-to-goodness stuffed horse. He admits he didn't really mean to.—J.A.

JUSTIN LOCKE

UMI

The FLEA MARKET Of Paris

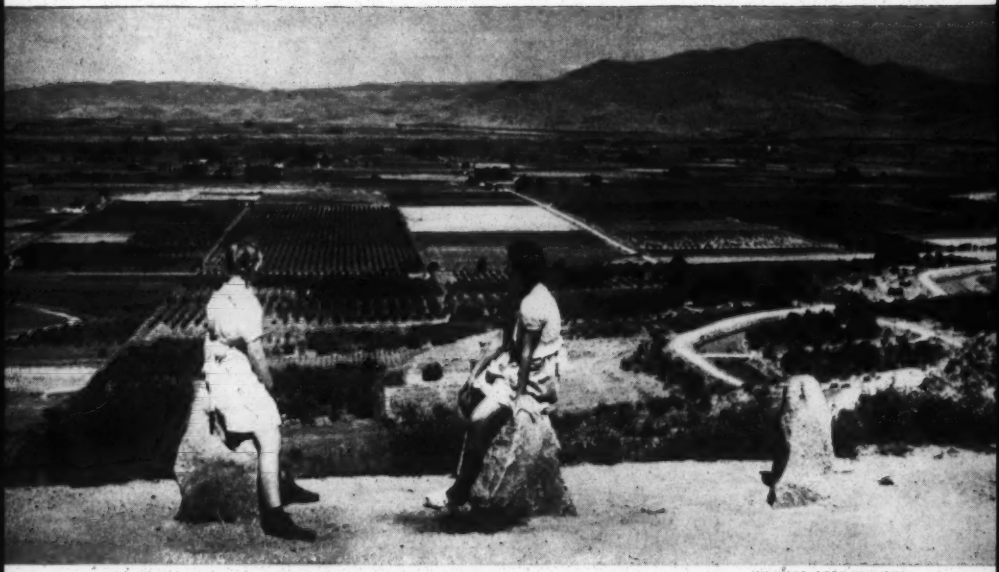


ALEXANDER TAYLOR

ARE you in dire need of a stuffed race horse? How about a good buy in assorted porcelain doorknobs? You'd be likely to find them at the Paris Flea Market. It's a bargain-hunter's paradise according to Franc Shor, Assistant Editor of the *National Geographic Magazine*, who describes it in the March, 1957, issue. The flea market spreads its wares over several acres at the French capital's northern limits. Objects for sale range from rare antique furniture to single earrings and used nails.

The flea market earned its uncomplimentary name during the latter part of the 19th century. Poor people of Paris combed the city's trash cans regularly. These *chiffonniers*, as they were called, scavenged an empty medicine bottle here, a once-treasured bauble there. Then, bundling up their harvest, they set out across Paris. Near the old north gates of Paris, the flea market was born.

Hard-bitten vendors sell bike handles, boxes, perhaps a stolen violin. The lure of finding an occasional jewel



MAYNARD OWEN WILLIAMS

about-faces on itself through the uplands. All Idaho's rivers but one are swallowed by the Pacific. Bear River wanders into Utah's Great Salt Lake. Irrigation feeds thirsty acres except in the mountainous north where plenty of rain does the job. Orchards blossom on irrigated land near Emmett, above.

Some Idaho springs gush water so hot it is piped into homes. Sightseers inspect the opposite extreme—caves chilled by never-melting ice. Three rivers lose themselves in the east-central desert. They may find outlet in springs bubbling from the side of Snake River Canyon, in the southwest of the state.

Hells Canyon, site of proposed dams, cuts through the Seven Devils Mountains. Here the Snake River rumbles more than 7,000 feet below the canyon rim, 2,000 feet deeper than the Grand Canyon of the Colorado.

Not to be outdone, the Salmon River carves a forest-rimmed canyon through

WILDERNESS AHEAD—Idaho leads the states in National Forest acreage. Here, on rugged Lolo Trail, youngsters exhibit ax, shovel, and bucket—proper gear for forest travel

RALPH GRAY, NATIONAL GEOGRAPHIC STAFF

ROSS HALL

Wilderness Lingers In Idaho

ASK an Idahoan what the picture above suggests. He'll probably say "spring" before you can say "lumberjack." At this ideal season in Idaho, thawing ice puts a gallop in the Clearwater River. Thousands of logs buck downstream, sometimes 100 miles, to hungry sawmills, while men in calked boots shove and strain to keep them moving. Driving logs is hard, skilled work. Many a logger tumbles into icy waters and considers it part of the Pacific Northwest tradition.

Idaho's logging industry spreads across 22,000,000 acres of forest land canopied by Douglas fir, red cedar, white pine, yellow pine, white fir, and spruce. Sweat-smeared axmen, pausing to draw breath, may gaze nonchalantly at tree-clothed mountains, primitive valleys, and hidden waterfalls that would draw gasps from summer vacationists. Animals appear unexpectedly as if waiting to pose for pictures—an ambling bear, a nervous deer or antelope, a shy, furtive bobcat.

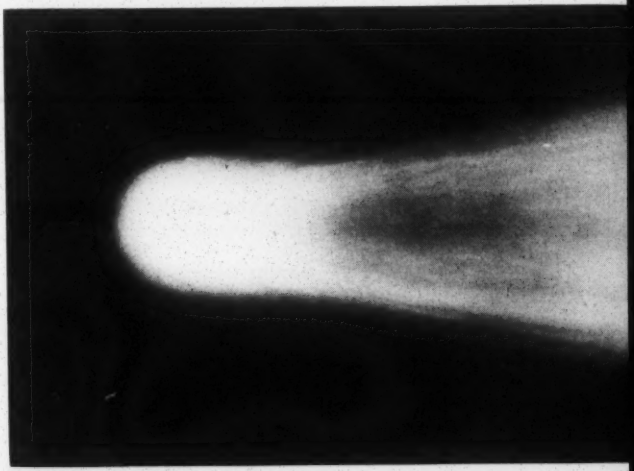
Shoshone Indians called the place *Ee dah how*—"The Sun Comes Down the Mountains." Today, the name Idaho means fine potatoes as well as lumber. There's room for crops and dairy and poultry farming beside forests and mountains. Scenery dazzles. Eyes roam up, up to the 212-foot-high brink of Shoshone Falls on the Snake River in southern Idaho. The 420-mile Salmon River ranks as one of the longest rivers within one state. Chief tributary of the Snake, the Salmon rises at 8,000-foot altitude in the Sawtooth Mountains, then

There's A Comet In The Sky

You can't count on a comet. But if astronomers are correct, you'll see a good show tonight.

LOOK at the northwestern sky after sunset tonight. Bring your eyes down, near the horizon. There—you should be able to see Comet Arend-Roland trailing its yellow tresses among familiar, stay-at-home stars.

No one had ever seen the present comet until November 8, 1956. Then it made its bow in photographs taken by two Belgian astronomers, S. Arend and M. Roland, at the Royal Observatory at Uccle, Belgium. It had slipped into sight from the frontier of the solar system, far beyond the known planets, and was roaming southward in the constellation Triangulum. Its egg-shaped orbit took it within a mere 52,000,000 miles of Earth before it began to climb away, moving north and east through the sky. But until the last few days, it has been too much in line with the sun to be generally visible.



MOUNT WILSON OBSERVATORY

Astronomers believe comets are made up of small space particles and gases, clinging close to one another to form a body—the nucleus—sometimes as big as Earth. Particles and gases spray out behind the comet in the shape of a tail—always pointing away from the sun.

Superstitious folk used to dread the possibility of Earth's passing through the comet's tail. Earth did hit the tail of Halley's Comet (above) in 1910, with no noticeable effect except a few meteors.

Because comets have so little density, their appearance is apt to change unpredictably. At time of writing, astronomers think the present visitor, Comet Arend-Roland, should be about as bright as the North Star. It probably will show best away from city haze. Binoculars will enhance the view.

It probably won't be as spectacular as Halley's Comet, which pays a call about every 76 years. In 1910 it swept past the sun trailing a 93,000,000-mile-long tail. Previously it put on a show in 1835, 1759, and so on, including, it is said, the year of the founding of Jamestown Colony, 1607. Edmund Halley, a British astronomer, accurately calculated the comet's future visits after studying its orbit in 1682. Its next appearance is scheduled for 1985.

Comet Arend-Roland, now outward bound, may swing back to the outskirts of the solar system, not to reappear for years. It may escape the solar system entirely. Or it may be "captured" by the gravity of a large planet and remain comparatively close to the sun.

UMI

ANSGAR E. JOHNSON

SAWTOOTH MOUNTAINS bare their fangs above Alice Lake in an Idaho primitive area

the state's secluded center. Nicknamed "River of No Return," the rebellious watercourse dares boatmen to share its boisterous journey downstream.

Picturesque names spell the glamor of the old West. At Massacre Rock in southern Idaho, Indians slew pioneers in 1862. Time-honored tracks of the Oregon Trail (see GSB, Mar. 18, 1957) crease the area. Bogus Basin, near Boise, the capital, took its name from an early false alarm "discovery" of gold. Now, it rings to the cry of skiers. At Craters of the Moon in south Idaho, hundreds of acres of cinder buttes recall comparatively recent volcanic activity. At City of Rocks, eroded stones suggest habitation. Pioneers paused here to daub names in axle grease.

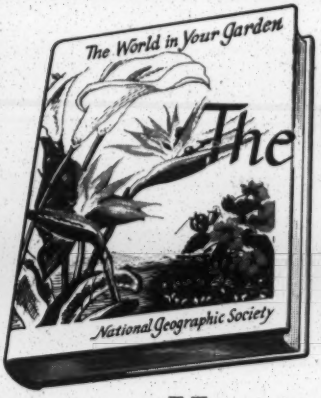
Idaho was the last state sliced from the old Oregon Territory—in 1890. Its boundaries suggest the shape of an easy chair, with its high back jammed against Canada. Miners have scarred Idaho, digging gold, silver, and lead.

Little over half a million people rejoice in Idaho as home. But hordes of sightseers flock to the state to breathe mountain air on pack trips, to taste fresh-caught trout and salmon, to rest tired eyes on grandeur.—S. H.

National Geographic References: ***Map***—Northwestern United States (paper, 75¢). ***Magazine***—June 1953, "Following the Trail of Lewis and Clark" (75¢); July 1951, "Idaho Loggers Battle a River (Clearwater)" (75¢).

NATIONAL GEOGRAPHIC PHOTOGRAPHER KATHLEEN REVIS

SALMON RIVER lives up to its name. From its waters came this 34-pound salmon, checkered by lying on truck slats



The World in Your Garden

The National Geographic Society's new book reveals adventure, geography, and exotic lore behind everyday flowers, fruits, and vegetables

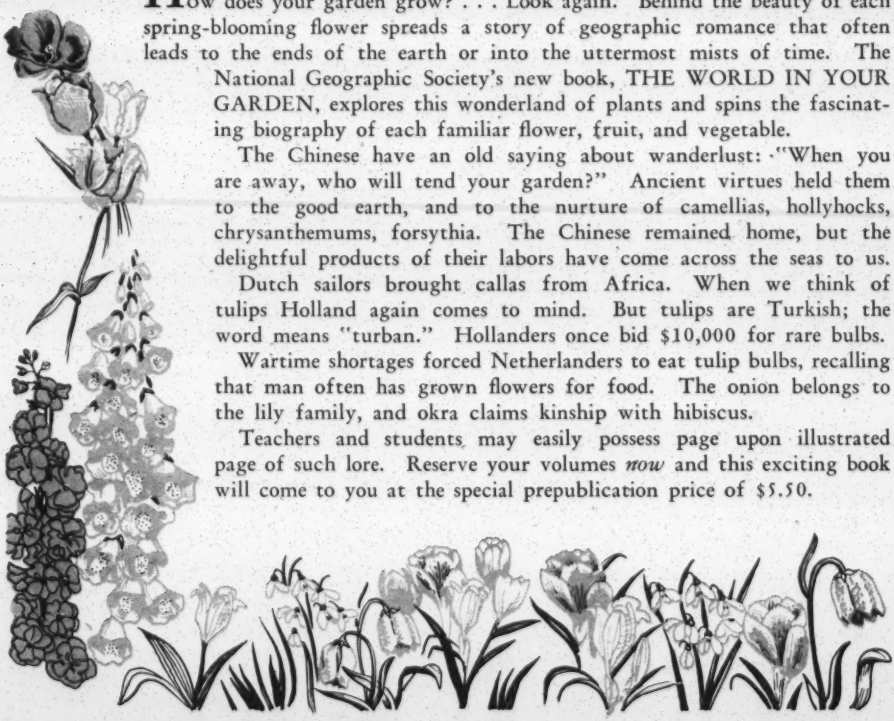
How does your garden grow? . . . Look again. Behind the beauty of each spring-blooming flower spreads a story of geographic romance that often leads to the ends of the earth or into the uttermost mists of time. The National Geographic Society's new book, THE WORLD IN YOUR GARDEN, explores this wonderland of plants and spins the fascinating biography of each familiar flower, fruit, and vegetable.

The Chinese have an old saying about wanderlust: "When you are away, who will tend your garden?" Ancient virtues held them to the good earth, and to the nurture of camellias, hollyhocks, chrysanthemums, forsythia. The Chinese remained home, but the delightful products of their labors have come across the seas to us.

Dutch sailors brought callas from Africa. When we think of tulips Holland again comes to mind. But tulips are Turkish; the word means "turban." Hollanders once bid $10,000 for rare bulbs.

Wartime shortages forced Netherlanders to eat tulip bulbs, recalling that man often has grown flowers for food. The onion belongs to the lily family, and okra claims kinship with hibiscus.

Teachers and students may easily possess page upon illustrated page of such lore. Reserve your volumes *now* and this exciting book will come to you at the special prepublication price of $5.50.



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